DOCUMENT RESUME

ED 147 512 08 **CE 013 559**

TITLE	Experience Based Career Education Program. Final Report.
INSTITUTION	Creative Research Associates, Inc., Silver Spring, Md.
SPONS AGENCY	Bureau of Occupational and Adult Education (DHEW/OE), Washington, D.C.; District of Columbia Public Schools, Washington, D.C. Dept. of Career Development.
PUB DATE	Aug 77
CONTRACT	0589-AA-NS-0-7-GA
NOTE	79p.; For related documents see CE 011 209, CE 011 212
EDRS PRICE	MF-$0.83 HC-$4.67 Plus Postage.
DESCRIPTORS	Admission Criteria; *Career Education; Career Exploration; Daily Living Skills; *Educational Alternatives; Models; Pilot Projects; Program Descriptions; Program Development; Program Effectiveness; Program Evaluation; Program Planning; Program Validation; *School Community Cooperation; Senior High Schools; Skill Development; *Student Attitudes; Student Characteristics; Student Evaluation; *Student Improvement; Summer Programs; Vocational Development; *Work Experience Programs
IDENTIFIERS	District of Columbia; *Experience Based Career Education; Far West Laboratory for Educational R and D CA

ABSTRACT

An evaluation of the Experience Based Career Education (EBCE) Program of the District of Columbia Public Schools (DCEBCE) for summer, 1977, was conducted to provide preliminary information for the three-year program effort to use in program planning and decision making for the 1977-78 school year. DCEBCE was evaluated using the Context, Input, Process, and Product Model since it afforded a useful classification system of the strategies that can be employed to evaluate programs aimed at educational change. DCEBCE was based on the Far West Laboratory (FWL) version of EBCE, which serves as a comprehensive, individualized and alternate plan of learning for high school youth, and provides community work experiences for students. Focus of the evaluation was on identifying characteristics of the initial group of forty-seven beginning and ending tenth grade student participants in the summer program and determining program impact on them. Students were pretested in the areas of self-awareness, career maturity, and basic academic competency. Evaluation results showed that the summer program had been successful, with students and resource persons expressing mutual appreciation. Recommendations based on results of the evaluation included further developing the DCEBCE program into a model program, especially in the area of career development; hiring a skills specialist to train students in areas of deficiency; and hiring a counselor to meet students needs in career guidance and counseling. (TA)

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FINAL REPORT

EXPERIENCE BASED CAREER EDUCATION PROGRAM

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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Submitted to

The District of Columbia
Public Schools
Division of Career Development
Office of Educational Programs and Services

Contract No. 0589-AA-NS-0-7-GA

August 1977

CE 013 559

ACKNOWLEDGMENTS

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CHAPTER I

INTRODUCTION AND PROJECT DESCRIPTION

This evaluation report of the Experience Based Career Education Program of the District of Columbia Public Schools (DCEBCE) for summer, 1977, has three main purposes: to provide a description of the operational characteristics of the DCEBCE program; to describe the evaluation of the summer program, and specifically, the evaluation model selected for the program, the instrumentation and other data sources used, the results obtained, and the role of the evaluators throughout the program; and to provide recommendations that can be utilized in the program planning and decision-making processes for the DCEBCE program for the 1977-1978 school year.

Project Description

Since the passage of the career education legislation by the state legislatures and the Congress of the United States in the early 1970's, the concept of career education has gained considerable prominence in the eyes of educators and the public at large. Funds have been made available for the implementation of career education programs throughout the country, and a special commission for career education has been appointed by the U.S. Office of Education to oversee the operations of the federally supported programs. Specifically, the DCEBCE Program has been funded from Part D, Vocational Education Appropriations, which are administered by the Office of Vocational and Adult Education in the regional offices of DHEW.

Career education is defined as the "totality of (educational) experiences through which one learns about work." Operationally speaking, career education is a combination of several career related training activities, such as:

> Theoretical works pertaining to career development, career maturity, occupational maturity, and individual learning and development; federal and state legislation that formulated the policies and guidelines for career education; development and implementation of career education curricula in public school systems; and books, articles, and other publications which dealt with the concept and definition of career education. [1]

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1. U.S. Office of Education, Handbook for the Evaluation of Career Education Programs (Draft), 1974, p.3.

Even though District residents are offered a variety of public service jobs, clerical and other support area jobs -- both in government and private sectors, health service organizations and financial institutions -- the high rate of unemployment indicates that many do not have the qualifications and/or employability skills needed to fill such positions. This lack of needed skills can only adversely affect students' ability to break out of the poverty cycle. Moreover, many students seem to leave school before their actual graduation, due to lack of interest and failure to see any relationship between school and the real world of work in which they actually live. Work experience prior to graduation is restrictive and often appears to have little relationship to life goals.

As one possible solution to this perennial problem, and to take advantage of the provisions of Public Law 90-576, the D.C. Public Schools have established an Experience Based Career Education Program to serve as a comprehensive, individualized and alternate plan of learning for high school youth. The plan relies upon the active participation of the community to provide direct, non-paid learning experiences in real-life situations as preparation for future careers. The program is administered by the Division of Career Development Programs of the D.C. Public Schools as a three-year, re-negotiable, experimental project commencing during the 1976-77 academic year.

Objectives

The District of Columbia Experience Based Career Education Program (DCEBCE) has nine specific objectives for the first year. They are:

1.) Recruit, select and train staff;

2.) Recruit and train a cadre of resource persons;

3.) Prepare and conduct a comprehensive student recruitment campaign;

4.) Orient parents and community;

5.) Develop an evaluation design and provide on-going assessment;

6.) Implement program for 25 to 40 high school students;

7.) Provide for the elimination of sex-bias and sex-role stereotyping;

8.) Provide sex-fair guidance, counseling, placement and follow-up services;

9.) Establish and maintain adequate safeguards with respect to the work-related experiences of participating students.

In order to achieve these objectives, the project staff has developed an operational/managerial plan, which is described elsewhere in this report. The evaluators have established several objectives for their study and they are outlined under the "Evaluation Plan."

EBCE Operational Model

D.C. Experience Based Career Education (DCEBCE) has adopted the Far West Laboratory Model for its program design and implementation. The model has been developed by the career education researchers at the Far West Laboratories of the National Institute of Education, Oakland, California, and has been successfully tested in the Oakland public schools. The program started on an experimental basis and under a controlled environment in 1974 with 30 students from the city of Oakland. Soon after, Highland High School, Salt Lake City, Utah; Pacific Horizons High School, Stockton, California; and Edison High School, Fresno, California adopted the model as part of their alternate high school program. The Far West High School is where experiments were first conducted in EBCE, and the school continues to function as a laboratory school with a student body of approximately 200 and a staff of ten.

In 1974, a group of program and administrative personnel from the D.C. Public Schools was sent to observe the actual operation of the Far West model, and they were convinced that this model, with minor changes, could be successfully adapted for system-wide career education programs. Upon the application of the D.C. Schools for a grant allowing for the adoption of the Far West Laboratory Model, a grant was received for the implementation of the program.

Key Features of the Far West Laboratory Model

The Far West Laboratory Model adopted by DCEBCE has ten major features. They are:

"1.) EBCE enlists competent adults from all sectors of the community as colleagues in the educational process. They share their daily activities, skills and

knowledge, and often increase learning incentive by serving as adult models with whom students can identify.

2.) It redefines the role of school staff, who become primarily learning coordinators and facilitators rather than teachers in the traditional sense.

3.) The student plays a central role in planning and carrying out his own learning, mainly through individual projects which are carefully designed to blend growth in academic, interpersonal, career, and basic skills.

4.) Learning activities occur primarily at resource sites in the community, supported and supplemented by staff and instructional materials at an EBCE center.

5.) The instructional program focuses on core "process skills" essential for independent and lifelong learning: inquiry, problem-solving, decision-making; and basic skills in oral and written communication, reading, and mathematics.

6.) While "booklearning" is essential to the EBCE process of "learning by doing," traditional subject matter is not approached as a syllabus of prescribed and sequenced content. Instead, a given discipline is a context in which students can frame questions they deem important, and seek answers by applying academic skills in particular situations.

7.) Curricular aids, called Project Planning Packages, provide students and staff with a convenient framework for designing projects that integrate academic and career learning. Each Package unites a study area (such as social science) and careers associated with it under a single heading. It includes goals, relevant concepts, issues and topics, sample projects, a list of available resources, and suggested readings.

8.) While the student is given freedom to pursue self-chosen learning goals that have personal relevance, he is held strictly accountable for his educational progress through carefully specified program procedures. Credit is awarded only for completed work and demonstrated progress. It is then converted into local high school equivalencies, resulting in a standard diploma and transcript.

9.) The program is designed as an alternative for all students -- regardless of academic backgrounds or future plans -- so long as they are willing and able to profit from the EBCE style of individualized, experience-based learning.

10.) In focusing on career preparation, the program defines "career" as "one's progress through life," not as a particular job, and views preparation as acquiring the skills, knowledge, and personal versatility one needs in order to choose, pursue, and find satisfaction in a life role." [2]

The broad goal of the Far West Model is to produce graduates who are turned on to learning by their ability to view every situation and contact as an educational opportunity. The program is intended to provide students with skills sufficient for establishing and achieving important goals in their lives. Although Self Development and Career-Awareness Development are emphasized, the model also provides for the enhancement of basic skills (reading, writing, oral communication, and communication skills) in conjunction with Life Skills, such as interpersonal relationships, critical analysis of information in order to draw conclusions, problem solving by the evaluation of alternatives, and sound decision making.

According to the Far West Model, education is a joint endeavor with students, staff, and the community playing active, but distinct roles that are inter-related in many ways. Therefore, EBCE seeks the cooperative efforts of the community resources in its training program. The staff provides the necessary guidance for the students to learn through association, experimentation, exploration, and application. The model is flexible enough to allow for the project staff to make minor changes in the structure and implementation system in order to adapt the model to local conditions.

In general, it can be said, that the DCEBCE Program adopted all of the main features of the Far West Laboratory Model. In addition, special provision was made for the utilization of mathematics, science, foreign language and communication laboratories at local high school skill centers and college and university campuses in order to meet the basic competency requirements of students and to closely coordinate DCEBCE with other existing programs in the school system. Eastern High School, located in close proximity to the DCEBCE Center, was used as the host high school for the program. Also, deliberate

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2. James M. Johnson, EBCE: The Far West Model -- A Program Overview Oakland, California; Far West Laboratory, 1975, pp. 2-3.

emphasis has been placed on the elimination of sex bias and sex role stereotyping in the selection of staff and students, in the tasks to be done by students (one out of every five careers explored must be done in a non-traditional sex role area), and in the carrying out of such other DCEBCE activities as the selection and orienting of resource persons and dissemination of program information.

CHAPTER 2

EVALUATION PLAN AND INSTRUMENTS

This section is divided intc two parts. The first part is concerned with a description of the main characteristics of the summer session plan as originally conceived and as modified to work within the constraints of time and a limited number of applicants for the DCEBCE Program. The second part focuses on the new characteristics of the evaluation plan for the 1977-1978 academic year.

Summer 1977, Evaluation Plan

The DCEBCE Program was evaluated in terms of the behavioral objectives established in the original program proposal. These objectives determined the specific objectives of the evaluation, and they were as follows:

1.) To determine the appropriateness of the staff and student selection processes used for the project;

2.) To determine how far the project has succeeded in enlisting competent adults from all sectors of the community as partners in the project;

3.) To examine the training offered for such community resource persons in order to assess its usefulness;

4.) To measure the increase in self-awareness among students;

5.) To determine how far the participants have increased their awareness of the world of work;

6.) To reveal the extent to which students are capable of making decisions concerning their future careers;

7.) To determine how far the EBCE Program has helped the participants to obtain their choice of career(s) during their training;

8.) To examine the budget (from section 142 (C) of part D of Public Law 90-576) of the project in order to determine how the money has been expended for the current year;

9.) To determine the over-all effectiveness of the program in terms of student interest, student participation, parental involvement, community participation, career motivation of students, staff training and participation, elimination of sex-bias, guidance and counseling services, job placement services, practicum opportunities, problem solving and decision making skills, improvement in communications and basic mathematics, and the sequential educational progress of each participant.

The Context, Input, Process, and Product Model (CIPP) was the specific evaluation model applied to the DCEBCE Program, since it afforded a useful classification system of the strategies that can be employed to evaluate a complex program effort aimed at educational change. The CIPP Model allowed the evaluators to analyze the DCEBCE program at four different levels, specifically, context, input, process, and product.

Briefly, these four levels work in the following ways:

1.) Context evaluation is used to define the setting where the educational change is to occur, the unmet needs of that environment, and the problems underlying those needs. Both conceptual and empirical analyses are employed.

2.) Input evaluation determines how effectively the available human and material resources have been utilized to achieve the goals of the program. Additionally, it provides information for making program changes and for determining if outside assistance should be sought to meet program goals. Input evaluation is always crucial in the first year of a new program.

3.) Through a variety of data gathering devices, process evaluation provides feedback during the program's operation as to the effectiveness of the methods and techniques for accomplishing the objectives that have been established. The supply of information is intended to facilitate sound decision-making in order to improve the quality of the on-going program.

4.) Product evaluation determines the effectiveness of the particular program after it has run a full cycle.

Since the DCEBCE Program will be a three year effort, Creative Research Associates, Inc. has concentrated in its evaluation of the brief six-week, summer program to provide "pilot" or preliminary information at the four levels of the CIPP Model for utilization in the program planning and decision-

making for the forthcoming academic year. In particular, the evaluators have focused on identifying various characteristics of the intial group of participating students and on determining the impact of the program on them.

As it was noted in Creative Research Associates, Inc.'s proposal, the evaluation plan, as designed, was viewed as preliminary and subject to modification based upon discussion with the DCEBCE project director and staff and the operating realities of the summer program. Two such modifications were made: first, in the proposed sampling of the entire population of different groups as major data sources, the time constraints of the summer program and the pressures and activities involved at the outset of the program did not allow evaluators to directly contact all of these groups. For example, career resource persons employed in the resource sites, such as NASA and the Department of Human Resources, and members of the Advisory Council were not interviewed or questioned. Nevertheless, the data sources for the evaluation were numerous, including the DCEBCE project director, the staff, the participating students, the representatives from the Far West Laboratory, academic subject-matter teachers, and the representatives of the Regional Office of DHEW/USOE in Philadelphia. Additional data sources were program materials prepared by the Far West Laboratory, various fiscal, administrative and program materials prepared by the DCEBCE director and staff, the summer DCEBCE records of student participation, the report of the site visit by the team from the United States Office of Education, and minutes of the meetings of the Advisory Council. From these multiple sources the evaluators were able to obtain sufficient information to evaluate the summer program. An effort will be made to include additional data sources for the evaluation of the program during the 1977-1978 academic year.

The second modification involved the experimental design proposed for determining the impact of the summer DCEBCE program on the participants in terms of its stated objectives. Originally, a pre-test/post-test design with a control group had been planned. Since there was no way of obtaining a control group available for testing both at the beginning and at the end of the summer program, this design was modified. Furthermore, applicants to the program came from numerous high schools in different parts of the city, and their school records were not readily accessible for matching purposes. Each applicant was interviewed for the program on an individual basis over a period of several weeks, so that there was no point at which the entire group could have been brought together. Even if the group could have been assembled, the test battery was much too long for one group session. Also, the group selected for participation in the program was not finalized until shortly before the outset of the program in order to maximize the opportunities for students to apply and to then be interviewed by the staff.

For these reasons, a pre-test/post-test design involving only the DCEBCE students was adopted for the summer. Further design modification was made, because of the length of the test battery and the short duration of the summer program. The evaluators and the DCEBCE staff agreed that too much testing, too close together might create a negative attitude in the students. Therefore, post-testing was postponed from the end of summer to a partial post-testing in the early fall of those students returning for the Fall Semester of the program. Since a large majority of the students (75%) are returning, there should be a sufficient number of students for the purpose of comparing pre-test and post-test results for changes in behavior. The post-testing will include the Career Maturity Inventory (CMI), the Tennessee Self-Concept Scale (TSCS), and the Everyday Skills Test (EST). The specially developed Writing Sample will not be used until the end of the Spring Semester, 1978, in order to allow a sufficient period of time for instruction to take place and for changes in the areas of basic writing skills to occur.

With regard to student performance, the planned instrumentation was used in the three major areas of (1.) self awareness, (2.) career maturity, and (3.) basic academic competency. The Tennessee Self-Concept Scale (TSCS) was administered to assess self-awareness; the Career Maturity Index (CMI) to assess career maturity; and the Everyday Skills Test (EST) and a specially developed career-school relationships writing sample to assess basic academic competency. All of these instruments constituted the pre-test part of the experimental design, and were administered to students during the first week of the summer program. The description of these instruments and the results obtained from them are presented in the section entitled "Participating Students." In general, the instrumentation appeared to be appropriate, both for the objectives of the DCEBCE program and for the participating students. The same instrumentation is slated to be administered to new students coming into the program in the Fall Semester, 1977.

Academic Year, 1977-1978, Evaluation Plan

As with the summer evaluation plan, the evaluation plan for the coming year will evaluate the DCEBCE Program in terms of its stated objectives, which remain the same as those stated for the summer program. The CIPP Model described above will again constitute the evaluation model to be applied to the program. In addition, the same instrumentation in the three areas of self-awareness, career maturity, and basic academic competency that was used in the summer program will be used for new students entering in the fall. Only the Writing Sample on career-school relationships will undergo some refinement of both its directions and its scoring criteria.

Two changes are proposed for the long-term evaluation plan. One has to do with data sources, and the other, with the experimental design. With regard to data sources, the evaluators plan to sample not only all of the different groups involved in the summer evaluation, such as students, the DCEBCE director and staff, and subject-matter specialists, but also representatives from those groups that were not directly contacted during the summer evaluation. Included in these groups are parents of participating students, non-DCEBCE students in the proposed comparison group (described below), Advisory Council members, resource people employed at resource sites, and school administrators of the District of Columbia Public Schools (DCPS). Since the long-term evaluation will be continuing over the course of an academic year, there should be sufficient time to secure direct information from representatives of these groups through questionnaires and/or interviews. Information from all of the groups involved is necessary in order to evaluate the multiple effects of a process as complex as the DCEBCE Program is, both on its participating students and on its many other groups who are contributing to the program and the students in diverse ways.

With regard to other sources of data, the evaluators plan to utilize the same kinds of materials that were collected and analyzed for the summer evaluation. Such materials include the DCEBCE program materials, records of student participation and credits earned, and budget information. In addition, particular emphasis will be placed on examining student progress records or work products, such as Project Sketches, Project Plans, and Final Reports. Student work products were not systematically examined during the summer evaluation, since most of the students were working on the first round of the various tasks required of them right up to the close of the summer program, and they understandably took their products with them. For the long term evaluation, however, samples of student products should be available for a comparison with their performances on the pre-test/post-test instrumentation -- particularly with regard to the CMI and the Report Writing Sample.

The second change for the long term evaluation concerns the design for the pre-testing and post-testing. In consultation with the DCEBCE director and staff, it became apparent that a stratified, randomly selected control group of non-EBCE students could not be selected for several reasons. First, there was an insufficient number of applicants to allow for randomization. Second, many of the summer students planned to continue in the program in the fall, and a number of students had already been accepted for fall enrollment -- either of which could possibly introduce some selection bias into the

DCEBCE group. Third, even if there had been a sufficient number of applicants and the selection bias could be controlled, the geographical dispersion of the non-DCEBCE group for test data purposes would have made a randomly selected control group extremely impractical. Hence, an alternative was needed. After further discussion, the alternative agreed upon was that a comparison group be selected from Eastern High School, using two classes each from the tenth and eleventh grades.

Four classes have been proposed in order to allow for (1.) attrition within this group between the pre-testing and post-testing; (2.) as much matching as possible based on the pre-test results of the non-DCEBCE students with the DCEBCE students; and (3.) testing all of these non-DCEBCE students in a group. In addition, students in these classes should not be involved in any formal career development/education program during the 1977-1978 school year. This criterion has been imposed in order to determine the effects of the DCEBCE Program on its participants as clearly as possible. If the comparison group were drawn from another career education/development program, sorting out the differential effects of the two programs would be very difficult, because of probable differences in objectives, participating students, career-related experiences, and duration and intensity of the programs. Additional performance measures of student performance might be needed, so as not to bias the results in favor of one of the two groups.

The design that has been planned is shown diagramatically in Figure 1. The gain score for the DCEBCE group will be compared with the gain score for the non-DCEBCE group. These comparisons will be made for the tenth grade, the eleventh grade, and both grades combined. A statistical treatment (DCEBCE vs. non-DCEBCE groups) by levels (grades) Analysis of Variance (F test) will be used to test the statistical significance of the differences. The 5 percent level of confidence will be used to reject the null hypothesis of no difference between the DCEBCE group and non-DCEBCE group. Separate Analyses of Variance will be carried out for each major area tested, specifically, self-awareness, career maturity, and basic academic competency. Internal comparisons will be made by similar designs. Although primary interest will be focused on the gain scores on the various tests, both the pre-test and post-test results will also be shown in order to reveal the comparability of the two groups at the beginning of the academic year and their respective levels of achievement at the end of the academic year.

In addition, comparisons will be made between the level of DCEBCE student performance on the tests and the quality of student performance (rating or grade) on the specific tasks of the DCEBCE, such as the Project Plan and the Final Report.

Figure 1

Experimental Design for

the DCEBCE Using the Test Battery

Grade	Approx. N	Treatment Group DCEBCE		Non-Treatment (comparison) Group Non-DCEBCE	
		Males	Females	Males	Females
10					
11					
Both grades					

Evaluation Management Plan

The following schedule lists the tasks to be carried out in evaluating DCEBCE over the next school year.

Evaluation Management Plan

For August 1977 -- August 1978

Task	Responsibility	Start and Completion Dates
1. Evaluation Planning -- Finalize Design	Evaluator/EBCE Director	Aug. 1-30
2. Fall testing		
2.1 Select instruments	Evaluator	August 2
2.2 Obtain tests and answer sheets	Evaluator	August 3-30
2.3 Train test administrators	Evaluator	September 1
2.4 Administer tests to EBCE students	Evaluator/Teacher Coordinators	Sept. 7-13
2.4.1 Writing sample (new students only)	Evaluator	September 8
2.4.2 Tennessee Self Concept Scale	Teacher-Coordinators	September 9
2.4.3 Career Maturity Inventory	Teacher-Coordinators	September 13
2.4.4 Everyday Skills Test (School-wide Administration)	School System and Teacher-Coordinators	November 7
2.5 Arrange for Control Group	Evaluator/EBCE Director	Sept. 1-10
2.6 Administer tests to control group		
2.6.1 Tennessee and CMI	Evaluators	Sept. 12-30
2.6.2 Everyday Skills Test	School system and classroom teachers	November 7
2.7 Score Test Results -- EBCE and Control		
2.7.1 Writing Sample, Tennessee, and CMI	Evaluators	Sept. 8-Oct. 15
2.7.2 Everyday Skills Test	School system and classroom teachers	Nov. 8-Dec. 1

Evaluation Management Plan (Continued)

Task	Responsibility	Dates
3. Student Demographic Data -- obtain from student records	Evaluator/ EBCE Director	Sept. 1-Oct.1
4. Student Progress Records -- First Period	Evaluator/ EBCE Director	Oct. 15-30
5. Data Analysis		
5.1 EBCE -- growth of summer students	Evaluator	Oct. 15-Nov. 15
5.2 EBCE vs. control group pre-tests	Evaluator	Oct. 15-Nov. 15
5.3 Demographics	Evaluator	Oct. 15-Nov. 15
5.4 Writing Sample	Evaluator	Oct. 15-Nov. 15
5.5 Everyday Skills Test	Evaluator	Dec. 1 - 31
6. Observation		
6.1 Orientation	Evaluator	Sept. 6-16
6.2 Workshops and field sites	Evaluator	On-going
7. Report of Fall Testing and First Period Student Progress	Evaluator	Nov. 15- Jan. 31, 1978
8. Spring testing		
8.1 Train test administrators	Evaluator	April 30, 1978
8.2 Administer Tests EBCE and Control		
8.2.1 Writing Sample, Tennessee, CMI	Evaluator/Teacher-Coordinators	May 1978
8.2.2 Everyday Skills Test	School System/Teacher-Coordinators/Classroom Teachers	May 1978
9. Score Test Results -- EBCE and Control		
9.1 Writing Sample, Tennessee and CMI	Evaluator	May-June 1978
9.2 Everyday Skills Test	School System	May-June 1978
10. Student Progress Records -- Second through Fourth Periods	Evaluator/ EBCE Director	June 1978

Evaluation Management Plan (Continued)

Task	Responsibility	Dates
11. Data Analysis	Evaluator	June-July 1978
12. Final Report	Evaluator	July 31, 1978
13. Evaluation Planning for 1978-1979	Evaluator/ EBCE Director	Aug.1-3 , 1978
14. Fall testing	Evaluator	Sept.1-30, 1978

CHAPTER 3

PROGRAM OPERATIONS

Operating and Management Plan

The Program Audit conducted by Creative Research Associates, Inc. revealed that a detailed Operating Plan was developed and implemented by the DCEBCE project director. This plan provides excellent accountability for the project, with the specifications of detailed objectives, tasks, staff responsibilities, targetted completion dates, and the status (e.g., initiated, ongoing, accomplished) of each task. The major objectives included in the plan are:

"1.) Site selection, preparation, and occupation;

2.) Selection of Staff;

3.) Student recruitment and involvement;

4.) Orientation and training staff;

5.) Activation of Advisory Council;

6.) Initiation of dissemination efforts;

7.) Follow-up of Proposed Education Activities;

8.) Initiation of Resource File;

9.) Completion of other administrative tasks;

10.) Student EBCE Pre-Session;

11.) Initiation of student on-site experiences;

12.) Completion of Administrative Tasks."

An up-to-date review of the Operating Plan in mid-July with the project director showed that all objectives and tasks projected up to that date had been completed or were on-going activities.

Only two major problems were encountered in the implementation of the project. The Board of Education approved the project too late in the school year (December 1976) to enable implementation of the project with students during the Spring term. Student implementation was, therefore, postponed until the Summer term of 1977.

Secondly, there were delays in the Personnel Department in hiring. The resource analyst was not on board until mid-July. As a result, it was impossible to carry out some of the follow-up activities with resource sites. The addition of the resource analyst to the project staff will, however, facilitate the recruitment and follow-up of resource sites in the future.

Facilities

The D.C. Experience Based Career Education Center is located at the Payne Elementary School in Southeast Washington, D.C. One wing of the school has been renovated to house the project with an amount of space that is both sufficient and convenient for the students and staff. The Center is close to Eastern High School, the host high school for the program, and is accessible from all parts of the city by public transportation.

The project office, a reproduction center (located in a large storage area), a conference room, and the media center are located on the first floor. There are two large multi-pupose rooms containing offices for the teacher coordinators and space for group learning activities, one on the first floor and one on the second floor. Both multi-purpose rooms contain typewriters for student use. Both ventilation and lighting are adequate in the unairconditioned Center. Student restrooms are located on the lower level. There were some flooding problems caused by clogged drains. Also, the girls' lavatory was being used as a summer carpentry shop for the Renovation and Construction Team from another high school. While the boys used their designated lavatory, the girls shared facilities with the staff or used another lavatory in the main part of the Payne School. The problem with these facilities should be corrected by the beginning of the Fall Semester, 1977.

Equipment

The EBCE Center is modestly equipped and sufficiently furnished with useable and repaired items salvaged from the D.C. Schools' warehouse. Offices seemed to be adequately equipped with typewriters and file cabinets, although additional typewriters should be made available to the Learning Coordinators in order to further facilitate the typing and reproduction of program materials.

In the line of audio-visual equipment the Center has: one overhead projector, one duplicator, and one "datagraphix." The Center lacks a Xerox machine that would greatly facilitate the efficiency of office operations. Both a movie projector and a film strip projector are on order. A considerable effort is being made to develop a student-staff library of career-related materials.

Budget

The EBCE received a total of $158,071.00 of which $108,071. was a direct grant from the U.S. Office of Education and $49,000. an indirect grant from the state funds allocated for Career Development. The money has been budgeted by line item in accordance with the regulations of the D.C. Schools' Budget Office and expended as per their directives. The project director has the power to request spending from the budgeted items, and to request any revision or reprograming of the unexpended money. The project director is the budget manager for the project and makes the crucial decisions for the wise utilization of available funds.

To date, the DCEBCE Center has either spent or ear-marked all of those funds budgeted for use through the Summer Program. In addition to the computerized accounting system maintained by the Public Schools, the project office has kept a thorough accounting of all DCEBCE expenditures.

The project director monitored all spent and unspent monies allocated for DCEBCE in order to utilize them in the most efficient manner. For example, staff members were not always hired at the salary rate projected and sanctioned in the budget, The project director was able to request the rechanneling of the surplus resulting from the difference between the allotted salaries and the paying salaries to other areas of the project where money was needed, only by keeping a close scrutiny of the spending.

The findings show that the budget for the first year operation of DCEBCE was adequate. The budget met all contract obligations, and enough money remains to administer project activities and to meet project obligations during the remainder of the year.

Staffing

Recruitment and Selection

The DCEBCE Center is staffed by four teacher coordinators, one resource analyst, two secretaries, and one director. With the exception of the resource analyst, all personnel were recruited and hired through the regular D.C. Public Schools personnel process, which includes job classification, job advertisement, screening of applications, interviews with eligible candidates, and finally, hiring the most qualified individuals. The resource analyst was placed in accordance with the DCPS Personnel Office's "reduction in force procedures," which attempt to match need with available personnel qualifications.

Qualifications and Experience of the Staff

The DCEBCE director has excellent professional training and experience for the project. Specifically, she has been a classroom teacher, counselor, assistant director of a career development education program, and an able school administrator for several years. She has served as a cooperating teacher for student teachers from area colleges, and has been actively involved in professional organizations at the local, regional, and national levels. The DCEBCE director has a masters degree in counseling and has been working with the D.C. School System in various capacities since 1956. The director has worked in the DCEBCE Program with the unique advantage of knowing the school system and its operations very well, especially as they might be used to facilitate the administration of the program. The present director possesses the qualifications that are outlined in the original proposal, and has proven herself an asset to the program.

The resource analyst has a Master of Arts degree in Teaching and has been working as a Community Resource Coordinator for over a year within the D.C. Public Schools' Parent Community Involvement Program. In his former position, he gained valuable experience in working with local businesses and industries, and served as liaison between the school system and the community. He has also worked as an elementary school teacher and counselor in the District of Columbia, and is especially knowledgeable about student problems in the local schools. He is a native Washingtonian, currently involved in the day-to-day activities of the city, and with a deep concern and commitment to the DCEBCE Program.

The four teacher coordinators, 2 male and 2 female, have either completed or are currently working on masters degrees in their respective fields. They have all worked within the District of Columbia in education related activities prior to joining DCEBCE. Their combined experience includes working with youth as counselor, social worker, and athletic director in various community agencies and youth programs. They have all gained teaching experience at the elementary or secondary school levels before joining the program.

The secretarial members of the DCEBCE staff appeared to handle their job responsibilities well, and were especially helpful in facilitating the successful administration of the program.

Roles and Responsibilities of the Staff

The professional staff members working with DCEBCE each have specific roles and responsibilities.

The project director is the overall coordinator who functions as the project administrator. The director supervises the daily operations of the instructional system, including the recruitment and development of resources, the planning and coordination of student programs and projects, the management and use of supplementary learning activities, the documentation of student project plans and day-to-day progress, and the assignment of credits for completed student work.

The director ensures that program operations are in line with the goals and objectives set by the School System and the DCEBCE model, and determines the extent to which those goals have been achieved by staff and students. She also helps the staff to identify and confront problems and issues that arise; provides individual assistance to staff members; and identifies staff needs for in-service training and professional development activities.

It is the responsibility of the director to meet with parents, the press, the public, educators, business and labor leaders, and to serve on the program's policy advisory board. She is charged with responsibility for the safety, fire prevention, and security of the facility where the program is housed. Above all, the director manages the program funds, and reviews, recommends, and approves all expenditures regarding staff and students, including those for materials, equipment and transportation.

The resource analyst is primarily responsible for developing and maintaining the program's external resources; and for helping students find and use resources appropriate to their individual projects. More specifically, the resource analyst determines those resources needed by comparing student needs and interests with the available resources; and he plans how, when and where needed resources will be recruited. He identifies and contacts potential resources in order to impart to resource persons necessary information about DCEBCE and to maintain proper records on all resource agencies.

In addition, the resource analyst personally analyses resource centers by interviewing scores of resource persons and by identifying potential learning activities. He is responsible for the preparation of resource guides describing the range of learning activities possible at each site for later use by students and staff in the selection of resources and the planning of projects.

The resource analyst also plays the following roles at the DCEBCE Center: record keeping with regard to community resources; assisting students through accurate information in recruiting resources; helping students and staff to determine the cause of any conflicts with resource persons; measuring student progress in field activities; and maintaining proper public relations activities.

The role of the teacher coordinator is multi-faceted. He/she makes the first contact with students participating in EBCE programs. A student's decision making role is often influenced by the guidance given by the teaching coordinator. In addition, the teacher coordinator helps students gain knowledge of themselves by clarifying their values and by defining their educational and career needs and interests. Also, he/she helps students to make post-high school plans; interprets results of diagnostic tests; assists students in developing long-range plans by establishing realistic program goals; and explains DCEBCE resources and administrative procedures.

Furthermore, the teacher coordinator helps students plan field projects by setting suitable criteria for acceptable projects; completes learning programs by formulating meaningful questions and identifying resources; monitors student progress and assists them in evaluating their own work; and maintains regular interaction with students to assess their growth. He/she is responsible for assigning credits for completed projects and supplementary activities, and for conducting small group sessions focusing on planning, problem solving and career decision-making activities.

Staff Training

The DCEBCE director provided the initial orientation for the staff. Then consultants from the Far West Laboratory provided the leadership for the formal staff training program. Sessions were scheduled for six working days and included the following topics: the History of EBCE, Educational Values, Program Overview, Program Planning Techniques, Selection and Use of Community Resources, Credit Assignment, Advisory Groups, Progress Monitoring, Student Recruitment and Selection, Curriculum, Student Orientation, Program Implementation, Continued Assistance to be expected from the Far West Laboratory, etc.

The consultants from the Far West Laboratory were both informal and knowledgeable in their arrangement of the staff training program. They were ready and able to offer their services at short notice; and their availability to the project was especially helpful in the implementation of DCEBCE.

Program Implementation

The Summer DCEBCE Program commenced on June 20, 1977, with a formal ribbon cutting ceremony conducted by Dr. Wilbur A. Millard, Associate Superintendent, Office of Educational Programs and Services, DCPS, assisted by Mrs. Bessie D. Etheridge, State Coordinator for Career Education, and with a student doing the actual ribbon cutting. In addition, this function was attended by other school officials, community workers, and 57 participating students and some of their parents.

An orientation to the program and diagnostic testing was undertaken during the first two weeks of the program. Most children reported to class in time for the daily 8 A.M. start; tardiness and absences were comparatively minimal.

The orientation informally introduced the students to the program and its staff. By the end of the orientation, students knew what their tasks were to be, the resource centers they were to work at, how to earn their credits during the summer, and how to develop their own schedule for the entire summer session. At the end of the two weeks, the total number of enrolled students was 45, all of whom continued in the program until the end of the summer.

On the fifth day of the orientation, the resource persons from various community agencies where the students would work during the summer were invited to the school in order to give students some idea of their firms, in order to provide students with a sound basis for selecting companies at which to work. Students were allowed to move from group to group in order to listen to and question as many representatives as possible.

During the second and third weeks of the project, teacher coordinators took students in small groups to various resource centers according to a previously arranged schedule. They visited financial institutions, health facilities, government offices, law enforcement agencies, legislative bodies, stock brokerage firms, transportation centers, etc, in order to gain a firsthand knowledge of these resource sites. After both individual and group counseling, the students made their own final decisions for work placement for the summer.

With regard to credits for work done, a student received a ½ Carnegie credit unit for completing the elective course, Orientation to EBCE. This course required completion of an "Initial Planning Worksheet," participation in the orientation workshops, participation in group resource site orientation visits, preparation of five "Project Sketches," development of

a "Project Plan," individual participation in site orientation experiences, and completion of the "Career Orientation Guide." If a student actually implemented the "Project Plan" and then completed a project, he/she received another ½ Carnegie credit unit in the academic area of that project.

On a daily basis students first visited the DCEBCE Center for a brief session, and then reported to their respective resource sites to spend no less than 4 hours working with the resource persons as previously arranged. The teacher coordinators visited each site according to a regular schedule, in order to assess any problem areas existing between students and resource persons and to expedite student progress. Changing resource sites was rare; most of the students continued to work with their original resource persons throughout the summer.

The project staff implemented the program as it was originally planned. Although the Far West Laboratory Model was followed closely, local and individual circumstances were also taken into account. The staff members worked together as a team, consulted each other when problems arose, and facilitated students in their academic preparation for the requirements of the real world of work.

Resource Development

With its emphasis on field experiences and self-directed learning, resource development is a key aspect of the DCEBCE Program. Although adequate progress was made for the summer program due to the concerted efforts of the project director, this function has been severely hampered by the failure of the school system to fill this position prior to the summer session. In fact, the position was not filled until mid-July. Hence, it will not be until fall that the full impact of this person is felt and resource development can proceed on an ongoing basis.

Nevertheless, in preparation for the summer session, the project staff with the assistance of Mrs. Rose Wheeler of the National Alliance of Businessmen, developed a list of over 200 potential resource sites. This list will be useful for long term development by the program's resource analyst.

For the summer program about 90 resource sites were invited to participate in DCEBCE. Seven organizations accepted the summer invitation, sending representatives to a workshop during the first week of the program. This workshop provided an opportunity for representatives to become familiar with the program and what would be required of them. Aditionally, they met with students and openly discussed their organizations and interests with them. This workshop was beneficial to students and resource representatives alike.

Resource persons from NASA, IBM, Washington Gas, and Honeywell were observed conducting various group sessions during the orientation workshop. The representative from IBM conducted a large group session in which he thoroughly explained IBM job categories and qualifications and afforded students every opportunity for asking questions about IBM careers. The NASA representative conducted a somewhat more technical session in which he discussed his own background in coming to his job, as well as the different job areas in NASA, from fashion design for space suits to mechanical skills for mechanical work. The Washington Gas representative discussed energy resources and the topic of solar energy as a replacement for oil and gas.

Student questioning was attentive and intelligent throughout the sessions and focused upon areas such as salary competition, working hours, educational preparation, etc. Teachers facilitated both the phrasing and answering of questions. Students were allowed to go from one group to the next in order to listen to as many resource persons as possible.

The resource sites used during the Summer 1977 included:

Amidon Elementary School Day Care Center
Capitol Hill Hospital
Children's Hospital
District of Columbia City Council
District of Columbia Fire Department
District of Columbia General Hospital
District of Columbia (Metropolitan) Police Department
District of Columbia Public Schools (Mrs. Rose Auld, Art Teacher, Eastern High School)
District of Columbia Public Schools Computer Center
District of Columbia Public Schools Educational Media Center
District of Columbia Public Schools Inter-High Connection
Goddard Space Center
Howard University (Mr. Lawrence A. Still, Chairman of the Department of Journalism)
McDonalds Hamburger Corporation
Merrill Lynch, Pierce, Fenner and Smith
National Air and Space Museum
National Arboretum
National Aeronautics Space Administration
National Geographic Society
Perpetual Federal Savings and Loan Association
Trinity College
Walter Reed Army Medical Center
Washington Metropolitan Area Transit Authority (Metro)
Washington Post
WOOK Radio
WUST Radio.

Curriculum Design Task Force

A curriculum design task force was organized by the DCEBCE director to examine the curriculum packages used in DCEBCE and to make recommendations to assure that the DCEBCE Program conforms to the academic objectives of subject areas for all D.C. High Schools. This group, formed from teachers and counseling personnel, started their work during the summer, and it will continue into the fall.

A questionnaire was administered to this group in order to obtain their reactions to the program and to provide feedback to the DCEBCE staff. The results are shown in Table 1.

Of the 14 participants, 13 rated the freedom of operation given to the task force as excellent. This was the largest number of excellent responses for a given item.
This was followed by staff participation and project activities and cooperation received from the EBCE staff, with 11 and 10 excellent ratings respectively.

On the other hand, the student body was rated as average by 11 participants, and the facilities of DCEBCE were rated by 8 participants as average. All other areas were rated as either good or excellent by a clear majority of the participant.

Overall, then, DCEBCE receives high marks by the Curriculum Task Force. Their continued involvement will be important in the continuing development of the program.

Table 1

Curriculum Design Task Force Questionnaire

Item	Excellent	Good	Average	Below Average
1. EBCE schedule of activities	3	8	3	0
2. Staff participation in project activities	11	3	0	0
3. Facilities at EBCE	1	4	8	1
4. Student body in general	0	2	11	0
5. Resource sites used	2	8	1	0
6. Interest of Resource Persons who participated in EBCE	3	5	4	0
7. Freedom of operation given to the Task Force	13	1	0	0
8. Cooperation received from the EBCE staff	10	4	0	0
9. Project package development process	4	7	3	0
10. Actual project packages developed	3	5	4	1
11. Involvement of Resource Analysts	6	4	1	1
12. Overall quality of the project packages developed	1	9	2	1
13. Overall quality of the Curriculum developed	3	8	1	1
14. Usefulness of the enrichment workshop conducted	4	4	4	1
15. Your involvement in resource recruitment	3	4	6	1

N = 14.
In lines adding to less than 14, the difference indicates the number of no responses for that item.

CHAPTER 4

THE PARTICIPATING STUDENTS

In this chapter are presented the recruitment and selection processes used with students, results of the pre-testing, student progress in the summer program, and student attitude toward the summer experience.

Recruitment and Selection

For the summer program, a student recruitment package was forwarded to all junior and senior high schools and private non-profit schools in Washington D.C. This package included a Program Announcement for school administrators and counselors, an announcement for students, and an application form. In addition, the project director and teacher-coordinators made presentations at school assemblies.

The recruitment efforts resulted in 132 student applications. All 132 students were asked to come in for an interview accompanied by a parent or guardian. The purpose of the interview was to describe the program further to the students and parents and to screen students who displayed an interest in the program and would be most likely to benefit from it. For the summer program students were accepted on a first-come-first-served basis. Consistent with the approach used by the Far West Regional Laboratory, only the interview was used in the selection process. Past academic performance was not a factor.

Of the students interviewed, 64 were registered for summer; 20 students were registered for the fall term; 4 students were rejected; and 18 students decided not to enroll after being interviewed. Twenty-six students declined to be interviewed.

Discussions were held with the project staff (August 2) regarding the feasibility of selecting the fall participants by using a random selection procedure. The purpose of this procedure would be to obtain a control group of applicants not accepted into the program for the purpose of experimental comparisons. Unfortunately, there was not a sufficient number of available applicants to make this process feasible.

Student Demography

Demographic characteristics of the students will be obtained for analytic purposes, particularly in describing student characteristics and as a basis for matching comparison groups in the experimental design. The data will be obtained from the DCEBCE Application and from school records. Data will include grade, sex, race, absences, tardiness, and grade point average.

As of this writing, school records have been requested for all students; however, probably due to the summer schedule, only a small number of these records have been received by DCEBCE.

The grade and sex breakdown is shown in Table 2. There were almost twice as many girls as boys enrolled in the summer.

Table 2

Sex and Grade of Participants

Sex	Beginning 10th Grade	Ending 10th Grade	Total
Male	7	9	16
Female	15	16	31
Total	22	25	47

Retention Rate

Of the 57 students who started, 47 completed the summer program. The original target established by the project director was 60 students, with retention at the close of the summer of 45 students. Retention was slightly better than anticipated.

The reasons for student withdrawals from the program are as follows:

4 -- Poor attendance,
2 -- Illness,
1 -- Summer Job,
1 -- Student not in the 10th grade,
2 -- Unknown.

Forty-two students indicated that they plan to continue in the program in the Fall term. Overall, retention in the program is quite good.

Student Performance: Pre-Test Results on Instruments

Instrumentation in the three areas of self-awareness, career maturity, and basic academic competency was administered, scored and anlyzed for the students enrolled in the summer DCEBCE. For two of the areas, career maturity and self-awareness, existing standardized tests were used, specifically, the Career Maturity Inventory (CMI) and the Tennessee Self-Concept Scale (TSCS).

For the third area, basic academic competency, two instruments were used. The Everyday Skills Test (EST) was administered to determine student competency in those reading and mathematics skills considered essential for survival in a complex, modern society. For writing competency, an original instrument was developed by Creative Research Associates, Inc., since no existing instrument could be found that was appropriate to the tasks of the DCEBCE Program and grade/proficiency levels of the students enrolled in it.

The results of the four student performance instruments follow. Included in the presentations of each of the instruments are: (1.) a brief description of the instrument and the types of scores obtained; (2.) the results shown in tables; (3.) a report of the key results; and (4.) conclusions supported by these findings.

Career Maturity Inventory (CMI)

The Attitude Scale and three of five parts of the Competence Test of the CMI were administered. Those parts of the Competence Test administered were: Part I -- Knowing Yourself, Part 3 -- Choosing a Job, and Part 5 -- What Should They Do?

As stated in the Administration and Use Manual for CMI, "The Attitude Scale elicits the feelings, the subjective reactions, the dispositions that the individual has toward making a career choice and entering the world of work. Is work seen as a meaningful focus of life or is it viewed as drudgery? How involved and independent is the individual in the choice process? What considerations are made in selecting a career? These and other conative aspects of decision making are stated in the items of the Attitude Scale as they have actually been verbalized by young people. More specifically, five attitudinal clusters are surveyed:

-- involvement in the career choice process;

-- orientation toward work;

-- independence in decision making;

-- preference for career choice factors;

-- conceptions of the career choice process.

"In contrast, the Competence Test measures the more cognitive variables involved in choosing an occupation. These include: how well the individual can appraise his job-related capabilities (strengths and weaknesses); how much he knows about the world of work; how adept he is in matching personal characteristics with occupational requirements; how foresightful he is in planning for a career; and how effectively he can cope with the problems which arise in the course of career development."

The three parts of the Competence Test that were used measure the following:

Part 1: Knowing Yourself is a self appraisal instrument that is career related. Items describe the characteristics of a late adolescent and then ask, "What do you think?" The alternative reflects a dependence upon others, a need for certainty, overestimation of one's abilities; "don't know," and accurate self appraisal. The assumption is made that individuals who can accurately appraise the career-relevant capabilities of others are good self appraisers.

A sample question is as follows:

"Duane does a lot of wood shop work at home and also takes shop courses at school. He has made several professional-looking cabinets and has won a prize for one in a citywide contest. He is now trying to decide if he has enough skill to continue with cabinetmaking.

What do you think?

A The work he has done would suggest that he has above average cabinetmaking skill and interests. (accurate self-appraisal)
B If his friends think he has cabinetmaking skill, he probably does and should continue making cabinets. (dependence upon others)
C He should plan carefully, since he may not have enough skill to be a successful cabinetmaker later on. (need for certainty)
D He has skill in making cabinets, and he should also design them. (overestimation)
E don't know."

Part 3: Choosing a Job measures competency in selecting career goals which are consistent with one's career capabilities, that is, to "match up" one's psycho-social characteristics with those required by the occupations being considered. Items describe the characteristics of individuals and then ask the student to choose the best occupation for the person described.

A sample item is:

"Don has been on the debating team for two years and has been a Big Brother for children without parents. He likes working with people and has been president of the Junior Class in his high school. His best grades are in social studies, although he is above average in all his courses and plans to go to college."

Incorrect alternatives are either in the wrong field, at the wrong level, or both. For the item above, "social worker" is a correct answer, while incorrect choices are "production planner," "policeman," and "advertising copywriter."

Part 5: "What Should They Do?" measures problem solving and decision making competencies. The career mature adolescent is able to solve problems in a way that is personally satisfying and socially acceptable. The

items present problems such as insufficient aptitude for a preferred occupation, conflict with parents over career goals, limitations due to emotional and physical handicaps, and indecision and lack of realism in making a career choice.

A sample item is as follows:

"John wants to be an engineer and has the ability to be one. But, his grades are poor, and he thinks he may not get into college.

What should he do?

A Work harder and get better grades.
B Talk with his teacher or a counselor.
C Expect to get into college despite his grades because he has the ability.
D Change his vocational choice to something else which doesn't require college.
E don't know.

These solutions to the problem of underachievement include the coping mechanisms of compensation (alternative A), consultation (alternative B), denial (alternative C), and competence (alternative D), with "don't know" (alternative E) as a possible expression of confusion or indecisiveness."

The CMI was selected because it has adequate reliability (internal consistency at .70 -- .89) and shows the most promise for detecting growth related to the program. Two parts of the Competency Test (Part 2: Knowing About Jobs and Part 4: Looking Ahead) were not administered this summer due to limited testing time.

The reading level of the CMI is at about the sixth grade. The CMI has been used effectively with urban minorities and there is no appreciable difference in responses of boys and girls.

The results of this administration are shown in Table 3. The percentile ranks shown are those provided in the manual. This information is, however, provided only as a reference point. As the manual indicates, local norms may be more relevant than those presented in the manual. The norms used for the Attitude Scale are the composite from a number of administrations, and norm sample sizes are small.

The results indicate that, when compared to the norm groups in the manual, DCEBCE students had a median percentile comparable to the norm group (47) for the section, "What Should They Do?", and somewhat lower than the norm group (35) in the other two sections of the test. (The difference in medians between "What Should They Do?" and all other measures is significant, using the sign test, at the 5% level of confidence.)

Individual differences cover the entire range of percentile ranks, and this result is more important to DCEBCE than the medians alone. With the intervention of EBCE activities, growth should be anticipated in all dimensions of the CMI. Raw scores as well as the percentile ranks have been retained in order to analyze growth following the EBCE experience. In the 1977-78 school year, a pre-test/post-test experimental design will be used to measure the impact of DCEBCE, with normal maturation taken into account.

An analysis of sex differences showed that girls in this group tended to score higher than boys in three of four measures. However, the difference in medians was statistically significant at the 5% level of confidence (chi square) only for the Attitude Scale. These results are shown in Table 4. The small sample size (15 boys and 23 girls) limits the ability of standard statistical techniques to detect group differences.

Table 3

Results of the Career Maturity Inventory

Percentile Rank	Knowing Yourself		Choosing a Job		What Should They Do?		Attitude Scale	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
80-99	1	2.6	3	7.9	3	7.9	3	7.9
60-79	4	10.5	4	10.5	10	26.3	5	13.2
40-59	12	31.6	10	26.3	13	34.2	10	26.3
20-39	9	23.7	19	50.0	8	21.1	4	10.5
0-19	12	31.6	2	5.3	4	10.5	16	42.1
Total	38	100.0	38	100.0	38	100.0	38	100.0
Median	35 % ile		35 % ile		47 % ile		35 % ile	
Lowest Quarter (Q_1)	10 % ile		26 % ile		34 % ile		8 % ile	
Highest Quarter (Q_3)	56 % ile		51 % ile		69 % ile		59 % ile	

Table 4

Comparison of CMI Results By Sex

	Knowing Yourself	Choosing a Job	What Should They Do?	Attitude Scale
Boys Median	28	39	35	10
Range: Low Score	1	11	5	3
High Score	69	88	90	82
n=15				
Girls Median	45	35	54	50
Range: Low Score	10	21	18	6
High Score	89	92	90	97
n=23				

Note: Values are percentile ranks.

Everyday Skills Test

The Everyday Skills Test (EST) was selected as an instrument for measuring cognitive development for a number of reasons. First, the test includes both criterion referenced measures and norm referenced measures. The criterion referenced tests deal with those areas of reading and mathematics that are required for effective participation in our complex, technological society. Norm referenced tests include reading and mathematics in areas where continuing education is important.

Secondly, the 2½ hour testing time required for the Everyday Skills Test gave the test a definite advantage over alternative test batteries requiring several days of testing.

Thirdly, the EST is being used by the D.C. Public Schools system-wide to test all tenth grade students, thereby making comparisons of selected student groups with systemwide test results possible.

The results of the criterion referenced part of the EST are presented in Table 5. Figures represent the percentages of students who achieved mastery in each area. DCEBCE students were those who enrolled in the summer program and were entering the tenth grade in the fall. (Results for those completing the tenth grade are not yet available, but will be obtained from student records in the fall.) Citywide results are for tenth grade students tested in October 1976.

A description of the test areas is as follows:

"BEHAVIORAL OBJECTIVES FOR EVERYDAY READING SKILLS:

1. Labels -- vocabulary

   The student will be able to identify an item labeled with consumer vocabulary such as detergent, ammonia, or vitamins in selecting its use for a specific purpose.

2. Telephone directories

   Given a page from a telephone book, the student will be able to locate specified information (e.g., area code, emergency numbers, notes or alphabetical listings).

3. Medical instructions

   The student will be able to identify the meaning of specific medical terminology or instructions such as antidote, allergic reactions, take at bedtime, or keep under refrigeration.

4. Labels -- caution

   The students will be able to specify the meaning of labels such as toxic, hazardous, flammable, contents under pressure, and do not pierce, that caution the readers against certain dangers.

Table 5

Percents of Mastery of Criterion-Referenced Skills in Reading and Mathematics on the Everyday Skills Test

Skill	EBCE %	Citywide % *
READING		
Labels-Vocabulary	88	89
Telephone Directories	80	84
Store Directories	88	79
Preparation Directories	75	78
Ingredients	88	76
Medical Instructions	83	68
Job Want Ads	67	68
Abbreviation Meanings	67	66
Outdoor Signs	54	64
Labels -- Caution	71	58
Transportation Schedules	46	53
Tax Forms	58	37
Job Applications	42	25
Newspaper -- Fact/Opinion	33	23
Driver's Handbook	33	19

* Tested in October 1976

EBCE N=24

Table 5 (Continued)

Percents of Mastery of Criterion-Referenced Skills in Reading and Mathematics on the Everyday Skills Test

Skill	EBCE %	Citywide % *
MATHEMATICS		
Currency	63	67
Spending Behavior	67	64
Cost Comparison	63	58
Travel Time	50	53
Time Calculation	54	36
Income Tax Calculation	38	20
Sales Tax	17	12
Discount Rate	17	11
Rate of Interest	8	7

* Tested in October 1976

EBCE N=24

5. Ingredients

Given the labels or lists of ingredients from different products, the student will select the one that is best suited for a specific purpose.

6. Preparation directions

Given a recipe on a label or package, the student will identify the procedure that should be followed to prepare the product.

7. Abbreviation meaning

Given a common abbreviation, the student will be able to specify its meaning.

8. Store directions

Given a department store directory, the student will be able to select the department or floor to locate a specific item or service, such as appliances or furniture.

9. Job want ads

Given a series of want ads, the student will be able to select the job that best fits specified criteria (e.g., part-time, permanent, working hours, or salary level).

10. Outdoor signs

Given common outdoor and street signs, the student will be able to identify the meaning of signs such as stop, one-way, yield, school crossing, detour, trucks use low gear, high voltage, or explosives.

11. Tax forms

Given a basic income tax or W2 form, the student will select the information that fits in a specified blank on the form.

12. Transportation schedules

Given a bus or plane schedule, the student will be able to determine the best travel plan for his or her needs.

13. Job applications

Given a job application, the student will be able to select the information that fits in a specified blank.

14. Driver's handbook

Given a passage from a driver's handbook, the student will be able to recall factual details.

15. Newspaper reporting (fact vs. opinion)

Given a newspaper report or an editorial, the student will be able to differentiate between fact and opinion.

BEHAVIORAL OBJECTIVES FOR EVERYDAY MATHEMATICS SKILLS:

1. Spending behavior

Given a certain amount of money, the student will select from among several of the articles those that he or she can afford.

2. Currency

Given the price of an article and denomination of the currency to be used in paying for it, the student will compute the amount of change to be returned.

3. Cost comparison

Given the prices of two articles, the student will determine the difference in cost.

4. Time calculation

Given two times of day, the student will determine the differences in time.

5. Travel time

Given the distance between two points and a rate of travel, the student will determine the required travel time.

6. Discount rate

Given the price of an article and a rate of discount, the student will determine the sales price.

7. Sales tax

Given the price of an article costing between $1.25 and $10.00 and the rate of sales tax, the student will determine the amount of sales tax to be paid.

8. Rate of interest

Given all variables in a simple "investment" problem except the rate or amount of interest, the student will find the rate of interest.

9. Income tax calculations

The student will be able to perform computations of the sort required on the most basic income tax form."

The results of the Everyday Skills Test show that the DCEBCE students scored slightly higher than tenth grade students in general. Eight of 15 Reading areas and 6 of 9 Mathematics areas favored DCEBCE students. Differences in the percentages, however, are not statistically significant, most likely because of the small sample size for DCEBCE students (N=24).

The normative sections of the EST include subscores in Reading Reference Materials and Graphics and in Mathematics Computation. The results (Table 6) show that the entering-tenth-grade DCEBCE students were below national norms, with median grade equivalents of 6.0 on three scores and only 5.3 on the Reading of Graphics subscore. (Data for citywide comparison was not available.) This low level of performance will need to be given attention by the DCEBCE staff in order to upgrade the functional reading and mathematics skills of these students, especially since very few of them (1 to 4) are performing at or above grade level.

Table 6

Results of the Everyday Skills Tests in Reading and Mathematics (Normative Sections) in Grade Equivalents

Grade Equivalents	READING			Mathematics
	Total	Reference Materials	Graphics	Computation
12.0+	2	1	2	0
11.0-11.9	0	0	0	0
10.0-10.9	0	3	0	1
9.0-9.9	1	1	0	1
8.0-8.9	1	0	4	0
7.0-7.9	2	2	2	3
6.0-6.9	5	9	1	5
5.0-5.9	3	5	4	5
4.0-4.9	7	0	1	2
3.0-3.9	1	1	7	3
2.0-2.9	1	1	1	2
Number	23	23	22	22
Median	6.0	6.0	5.3	6.0

Tennessee Self-Concept Scale

The Tennessee Self-Concept Scale (TSCS) Counseling Form was used to measure various aspects of the self-concept, such as acceptance of "physical self," "personal self," and "Social self." The TSCS has a readability of approximately the sixth grade level, and the Counseling Form has been frequently used in studies involving Black adolescents. Two scores for each individual are provided by the Cousneling Form -- "The Self Criticism Score" and "The Positive Score." The "Self Criticism" section checks on the extent to which an individual is realistic about typical shortcomings that most people possess. The "Positive" section addresses itself to how the individual feels about himself, what he actually does, and what or who he is. Extensive reliability and validity studies have been done on the TSCS and Blacks have been included in the norm groups.

On this instrument, scores toward the center of the distribution (T scores of 40 to 59) represent realistic self-appraisals. Scores that are too high or too low in comparison with the norm group often indicate the need for counseling and the development of better self-understanding. A high score on the Self Criticism score may suggest that the individual has inadequate defense mechanisms. A low Self Criticism score may suggest that the individual doesn't adequately appraise weaknesses and may have too many defense mechanisms.

Table 7 indicates the results of the analysis. The presentation is in terms of national norm T scores, which have a mean of 50 and a standard deviation of 10. A low score is 39 or below, and a high score 60 or above.

The averages -- medians of 47 for Self Criticism and 46 for Self-Esteem -- indicate that the DCEBCE students, as a group, are very close to national norms. However, the distribution in Table 7 also indicates that there are students who would probably benefit from assistance in self-appraisal. This applies to those with scores of 60 or more or 39 or less on each scale.

Table 7

Tennessee Self Concept Scale Results

National Norm T Scores	Self Criticism	Total Positive Self-Esteem
70+	1	0
60-69	0	8
50-59	15	9
40-49	13	13
30-39	7	8
20-29	2	0
Total	38	38
Median	47	46

Report Writing Sample: Career-School Relationships

As was noted earlier, the evaluators found it necessary to develop an original instrument in order to estimate students' report writing competencies for the numerous writing tasks that are required by the DCEBCE Program. In developing this instrument, the evaluators attempted to provide the DCEBCE Director and staff with information not only about the students' report writing competencies, but also concerning student attitudes toward the subjects of school, and in particular, careers that interest them. For this purpose, the Report Writing Sample (RWS) also had to deal with subject-matter that would be familiar to each student. Moreover, the writing task would have to be sufficiently complex in order to elicit a report long enough to be scored for English mechanics, such as grammar, punctuation, and spelling. After considering several possible content topics, the topic selected concerned the relationships between school subjects that students had already taken -- or would like to take -- and that would be helpful in furthering their current career interests.

Accordingly, a set of written directions for the students was developed for the Report Writing Sample to include an example of the specific relationships between various school subjects and a particular career -- in this instance, graphic arts. The students were asked to list the particular careers in which they currently were interested, and then to describe the relationships between those careers and their school subjects in approximately 200 words. Attached to the written directions for all students (which were also read aloud by the test administrators) were lined sheets to be used for the reports.

During the administration of RWS, the test administrators discovered that the students needed many additional examples of the relationships between given careers they had identified and the subjects they had taken -- or would like to take -- before they could begin writing. The administrators gave as much assistance to the students as they requested, since the RWS was not primarily a test of knowledge, but rather a measure of their report writing skills. With only a few exceptions, most of the students required assistance in addressing the relationships between specific school subjects and careers. It should also be noted that DCEBCE students responded quite positively to taking the RWS. However, they did experience difficulties in the content of its topic.

Students received two scores on the RWS. One score consisted of the ratio of errors made by a student in four major categories of English mechanics (i.e., sentence structure, grammar, punctuation and spelling) to the total number of words written by that student. For example, if a student received an English mechanics error score of 1:6, this score indicated one mechanical error for every six words written. Using another example, if a student received an error score of 1:26, he was averaging one error per 26 words. The general interpretation of the English mechanics score is the higher the ratio, the higher the level of competency in writing mechanics.

The second RWS score consisted of the ratio of separate or distinct ideas presented by a student to the total number of words written by that student. Four specific categories were used to derive the ideas ratio score: (1) subject matter (such as geometry or reading) named; (2) relationship/helpfulness of that subject matter to the particular career identified; (3) personal reasons for being interested in a given career; and (4) elaboration of ideas in (1) -- (3) above through anecdotes from personal experience and/or informational examples. For example, if a student had an idea ratio of 1:12, this student was averaging one idea per 12 words. Citing another example, a student with an idea ratio of 1:33 was averaging only one idea for every 33 words. The general interpretation of the idea ratio score is the lower the ratio of ideas to words, the higher the level of competency in the student's ability to write concisely in a well-organized fashion. It should be noted that in the interpretation of the ideas ratio score, scoring for idea content was as generous as possible. Naming a subject matter was scored as an idea. Although the WRS task did not ask for personal reasons for being interested in a career, these were also credited as ideas.

The RWS results are presented in two tables. Table 8 shows the frequency distributions of the English mechanics error ratios and ideas ratios for the full group of DCEBCE students. Table 9 gives the means and standard deviations for both types of ratios organized by sex, grade level, and full group.

Table 8

Frequency Distribution for Two Types of Scores from the Report Writing Sample for Summer DCEBCE Students

Errors in English Mechanics to Number of Words Written		Ideas in Report to Number of Words Written	
(C.L.=2)	f	(C.L.=5)	f
1:23-1:24	1	1:61-1:65	2
1:21-1:22	0	1:56-1:60	0
1:19-1:20	3	1:51-1:55	1
1:17-1:18	3	1:46-1:50	1
1:15-1:16	1	1:41-1:45	0
1:13-1:14	4	1:36-1:40	0
1:11-1:12	6	1:31-1:35	4
1:9-1:10	4	1:26-1:30	3
1:7-1:8	5	1:21-1:25	10
1:5-1:6	16	1:16-1:20	12
1:3-1:4	4	1:11-1:15	12
1:1-1:2	1	1:6-1:10	2
Median=1:7.5		Median=1:18	
n=48		n=47	

Table 9

Ratios of Errors in English Mechanics and Ideas to Number of Words in EBCE Written Report on the Relationship Between Schoolwork and Career Interest

EBCE Participants by Sex and Grade Level		Ratio of Errors in English Mechanics to Number of Words		Ratio of Ideas to Number of Words	
	n	$\bar{x}$	s	$\bar{x}$	s
Girls	36	1:9.9	1:5.6	1:22.5	1:12.6
Boys	12	1:7.8	1:3.7	1:18.9	1:13.8
Beginning 10th Grade	21	1:8.1	1:4.4	1:24.0	1:10.1
Ending 10th	26	1:10.6	1:5.6	1:20.2	1:14.1
Total Group	48[a]	1:9.3	1:5.3	1:21.6	1:12.8

All decimal fractions have been rounded to one place.

[a] Sample sizes for beginning and ending grade lo do not total to 48, because one female student did not record her grade level.

Several of the results or findings presented here have implications for future program planning and staffing. First, the overall performance of the summer DCEBCE group suggests that their general competency in English mechanics is quite limited. For example, the median for the group was a very low ratio of 1:7.5, while the mean was almost as low, with a ratio of 1:9.3. In analyzing the individual writing samples, the scorers found a marked difference in both the types of errors made and the number and adequacy of the ideas presented by students scoring an error ratio of 1:12 and below. These students' papers were typically vague and rambling in terms of logical relationships of ideas; and they were inadequate for the kinds of tasks confronting high school students in their regular academic subjects as well as for the specific tasks of the DCEBCE program.

Since 40 of the 48 students had error ratio scores of 1:12 or below, these results strongly suggest a definite need for special instruction in the area of English mechanics, with a particular emphasis on report writing.

Secondly, for English mechanics, the boys performed slightly less well than the girls (1:7.8 vs. 1:9.9). However, the boys produced slightly more ideas per number of words (1:18.9) than the girls (1:22.5).

Third, the ending tenth graders performed better on the average than did the beginning tenth graders for both aspects of the performance on the RWS. For ending tenth graders the error ratio score was 1:10.6, and the ideas ratio score was 1:20.2; for the beginning tenth graders, the respective scores were 1:8.1 and 1:24.0.

In general, the results from the WRS seem somewhat parallel to those obtained from the norm-referenced sections of the EST. By and large, the results from both of these instruments suggest the need for special assistance to the DCEBCE students in the area of basic academic competency.

Student Progress in the Program

Student progress in the program can be measured, in part, through the tasks required of them in DCEBCE and the earning of credits. As part of the DCEBCE, students develop written plans describing the activities they plan to carry out. These activities generally include information gathering at resource sites and independent study through a variety of sources. Teacher-coordinators provide assistance and also provide approval for each item submitted by the student. The documents are developed by the student in the following sequence:

1. Project Sketch -- a brief, preliminary idea paper.
2. Project Plan -- a detailed plan giving a statement of the problem, resource contacts, areas of independent study.
3. Field Activity/Resource Contact Reports -- provides progress information as it is developed.
4. Final Report -- the student submits a final report of the project.

These tasks require skills in planning, the gathering of information, the analysis and synthesis of information, and written and oral communication skills.

In the Far West model, completion of a full report requires more time than the six weeks available during the Summer session. For this reason, the goal of the summer session was to have students complete, at a minimum, Project Sketches, and to assess their progress in developing Project Plans. The frequency and percentage of Project Sketches, Project Plans and Final Reports completed are indicated in Table 10.

Table 10

Completion of DCEBCE Tasks

	Project Sketches	Project Plan	Final Report
Number of Students Completing	38	32	18
Percentage of Students Completing	83	70	41

Seventy percent of the students achieved the summer goal of developing a Project Plan, while 41% surpassed this goal by completing a final report. These are gratifying results.

Progress in the summer program is also measured by the earning of various credits. Orientation credits were given to those students who participated in the entire orientation. Workshop credits were given to those students who participated in various academic subject workshops delivered by teachers (curriculum committee). Students could earn 1 or 2 DCEBCE credits. These were motivational credits given for enrichment purposes.

Academic credits -- ½ Carnegie Unit -- could be earned for satisfactory achievement in a subject of the student's own choosing, with the concurrence of his teacher-coordinator. The number of credits earned by students are indicated in Table 11.

Table 11

Various Credits Earned by EBCE Students

	Orientation	Workshop	Academic
Number of Students Earning Credit	36	17	18
Percentage	78	37	39

Of the 17 students earning workshop credits, 7 earned 1 credit and 10 earned 2 credits. The workshops for which credits were earned are detailed in Table 12.

Table 12

Workshops in Which Credits Were Earned

Workshops	Number of Students
Spanish	10
Human Development	4
Music	2
Business	1
Total	17

The subjects in which academic credits were earned are detailed in Table 13.

Table 13

Subjects in Which Academic Credits Were Earned

Subject	Number of Students
English	8
Government or Civics	3
Introduction to Business	3
Science -- Introduction to Physics or Introduction to Chemistry	2
Business Mathematics	1
Art	1
Total	18

The major thrust of the summer program was to orient the students to the DCEBCE process itself. While the opportunity for earning academic credits was given, this was considered a "bonus" of the summer program and was developed primarily as a means of motivating students. From this standpoint, the 39% showing of students earning ½ academic credit is more than acceptable. However, during the school year the emphasis on academic credit will be important in maintaining comparability with the regular school program and in keeping DCEBCE students at the same academic pace as their peers in the same grade.

Absences and Tardiness

Average (median) absences for DCEBCE students were 4 out of 29 days, or an absence rate of 13.8%, which as shown in Table 14 is lower than the school-wide high school absence rate for the regular school term.

Table 14

Absence Rate Comparison

	EBCE	Senior High Schools *
Average (median) days absent	4	
Days in term	29	
Absence Rate	13.8	18.9

* School year, 1975-76, the latest regular school term for which data was available.

The reasons for absences were:

-- 3 Illness,

-- 1 Death in the Family,

-- 1 Schedule conflict.

Table 15 shows that boys had a narrow range of absences -- from 3 to 9 days, while girls had a wider range of absences, with about 35% with 0-2 days absent and almost 13% with 10 or more days absent.

The median for tardiness was 1 day. Table 16 indicates that girls were tardy less often than boys.

Table 15

Absences by Sex

Days Absent	Males		Females	
	Number	Percentage	Number	Percentage
0-2	0	0.0	11	35.5
3-7	7	46.7	14	45.2
8-9	8	53.3	2	6.5
10+	0	0.0	4	12.9
Total	15	100.0	31	100.1

Chi Square=16.99; df=3; statistically significant beyond the .001 level of confidence

Table 16

Tardiness - by Sex

Days Tardy	Males		Females	
	Number	Percentage	Number	Percentage
0-2	2	13.3	17	54.8
1-6	6	40.0	14	45.2
7+	7	46.7	0	0.0
Total	15	100.0	31	100.0

Chi Square = 18.58, df = 2, statistically significant beyond the .001 level of confidence.

Academic Credits Earned -- Relationship to Absences, Tardiness, Sex, and Attitudes

Not surprisingly, students who received their academic credit for the summer were absent less often and tardy less often than those students who did not receive academic credits.

Table 17 shows the relationship between absence and academic credits. Students who did not receive academic credit were absent more than twice as much as students who did.

Table 17 *

Absences and Earning of Academic Credit

Absences	Earned Academic Credit	Did Not Earn Academic Credit
Mean	2.8	6.5
Standard Deviation	2.2	3.1
Number	17	29

"t" = 4.67, df = 44, statistically significant beyond the .001 level of confidence.
* Based on preliminary data.

Table 18 shows that those who received academic credit were tardy no more often than two days, with the majority never tardy at all.

The results for both absences and tardiness in relationship to academic credit are both statistically significant.

Table 18 *

Tardiness and Earning of Academic Credit

Days Tardy	Earned Academic Credit		Did Not Earn Academic Credit	
	Number	Percent	Number	Percent
0	12	70.6	7	41.3
1 or 2	5	29.4	5	21.7
3+	0	0.0	17	37.0
Total	17	100.0	29	100.0

Chi Square = 9.50, df = 1, statistically significant at the .01 level of confidence.
* Based on preliminary data.

A larger percentage of girls than boys earned academic credit, with 14 girls and 3 boys earning credit. There was not a statistically significant difference in the percentages.

The relationship between sex and the earning of academic credit is represented in Table 19.

Table 19 *

Sex and Earning of Academic Credit

	Male		Female	
	Number	Percent	Number	Percent
Earned Academic Credit	3	18.8	14	45.2
Did Not Earn Academic Credit	13	81.2	17	54.8
Total	16	100.0	31	100.0

Chi Square = 3.16, df = 1, not statistically significant at the .05 level of confidence.
* Based on preliminary data.

The results of the Career Maturity Inventory were also compared to earning academic credits. Only the Attitude Scale was significantly related to earning academic credit. There were no statistically significant relationships for the three Competence Tests of the CMI (Knowing Yourself, Choosing a Job, What Should They Do?).

The results of the comparison of the Attitude Scale of the CMI with academic credit earned are indicated in Table 20. Students who had more positive attitudes tended to earn academic credit more often than those with less positive attitudes.

Table 20

Earning Academic Credit and the Attitude Scale of the Career Maturity Inventory

Percentiles on the Attitude Scale	Earned Academic Credit		Did Not Earn Academic Credit	
	Number	Percent	Number	Percent
60-99	6	46.2	3	15.0
30-59	5	38.5	5	25.0
0-29	2	15.4	13	65.0
Total	13	100.1	20	100.0

Chi Square = 7.68, df = 2, statistically significant beyond the .05 level of confidence.

Student Questionnaire Findings

A short questionnaire was administered to summer DCEBCE students at the end of their training in order to assess student experience with the program. The questionnaire was simple, to the point, and was designed to elicit students' true feelings about the different elements of DCEBCE, especially as to how it helped them formulate career ideas for the future. In order to assure maximum objectivity in the evaluation, the questionnaire was anonymous. Each item was rated on a five-point scale, with "strongly agree" as the highest point and "strongly disagree" as the lowest.

The results of the questionnaire are contained in Table 22.

When the students were asked whether they agreed that DCEBCE had given them freedom to plan their own activities during the summer, 78% either agreed (42.5%) or strongly agreed (35%). Only seven (17.5%) students were undecided, and only two (5%) students strongly disagreed with the statement. For the large majority of students EBCE gave sufficient freedom of choice to plan their own activities, unlike many conventional classrooms.

Table 21

Student Attitudes Toward DCEBCE At the End of the Summer Program

Item	Strongly Agree		Agree		Undecided		Disagree		Strongly Disagree	
	f	%	f	%	f	%	f	%	f	%
3. EBCE Program let me plan my own activities this Summer and manage my own time.	14	35.0	17	42.5	7	17.5	0	0.0	2	5.0
4. EBCE Project activities helped me to learn about careers.	23	57.5	13	32.5	3	7.5	0	0.0	1	2.5
5. EBCE Project activities helped me to learn about academic subjects as well.	9	22.5	24	60.0	3	7.5	3	7.5	1	2.5
6. EBCE project activities helped me to understand how academic knowledge is used in the world of work.	18	45.0	16	40.0	5	12.5	0	0.0	1	2.5
7. EBCE program gave me an opportunity to find more about career-related interests, abilities and values that I have.	20	50.0	14	35.0	6	15.0	0	0.0	0	0.0
8. In comparison with my past experiences with the regular school, EBCE has motivated me more toward a high school diploma.	23	57.5	7	17.5	6	15.0	2	5.0	1	2.5

Table 21 (Continued)

Student Attitude Toward DCEBCE At the End of the Summer Program

Item	Strongly Agree		Agree		Undecided		Disagree		Strongly Disagree	
	f	%	f	%	f	%	f	%	f	%
9. EBCE Summer program helped me to better understand myself.	9	22.5	18	45.0	6	15.0	4	10.0	3	7.5
10. EBCE Summer program helped me to get along better with others.	11	27.5	18	45.0	9	22.5	0	0.0	2	5.0
11. The persons I came in contact with at the resource sites this Summer were interested in the EBCE Programs.	13	32.5	17	42.5	8	20.0	1	2.5	0	0.0
12. I had enough choice and freedom to decide what to do at the resource sites.	13	32.5	20	50.0	3	7.5	4	10.0	0	0.0
13. At resource sites I actually did get to do things, rather than just watch or listen.	16	40.0	15	37.5	3	7.5	4	10.0	2	5.0
14. At EBCE people really care about me.	19	47.5	12	30.0	7	17.5	0	0.0	2	5.0
15. The staff at this school is really patient in working with us.	9	22.5	22	55.0	6	15.0	0	0.0	2	5.0

Table 21 (Continued)

Student Attitude Toward DCEBCE At the End of the Summer Program

Item	Strongly Agree		Agree		Undecided		Disagree		Strongly Disagree	
	f	%	f	%	f	%	f	%	f	%
16. EBCE gave a chance for students to decide how the school should be run.	9	22.5	22	55	6	15.0	0	0 .0	2	5.0
17. I feel free to go to any one of the staff members when I have a personal problem.	15	37.5	16	40.0	4	10 .0	3	7.5	2	5 .0
18. I like EBCE because I learned a lot of new things here.	12	30 .0	22	55 .0	5	12.5	0	0.0	0	0 .0
19. The staff at EBCE seem to be personally concerned about me.	11	27.5	22	55 .0	6	15 .0	0	0 .0	1	2.5
20. Each morning this Summer I really looked forward to coming to school for EBCE programs.	7	17.5	16	40 .0	10	25 .0	5	12.5	2	5 .0

Thirty-six (92%) students either agreed (13 or 32.5%) or strongly agreed (23 or 57.5%) that DCEBCE summer activities helped them to learn about careers that had not previously occurred to them. For this item, only 3 students (7.5%) were undecided, and only one student strongly disagreed. The program evidently was successful in its dissemination of concrete career information to a majority of the students.

Thirty-three (82.5%) students either agreed or strongly agreed to the statement that they learned about academic subjects as well as career-related subjects during their summer participation in DCEBCE. Three (7.5%) students were undecided, and four (10%) either disagreed or strongly disagreed.

Thirty-four (85%) students either agreed (16 or 40%) or strongly agreed to the fact that the activities they participated in through DCEBCE helped them to understand ways in which academic knowledge is useful in the real world of work. Only one (2.5%) student diagreed, and 5 (12.5%) students were undecided. DCEBCE has successfully motivated students to greater achievement in the traditional academic subject areas of English, Mathematics and Science by demonstrating to students the relevancy of these fields to work in the real world.

Thirty-four (85%) students agreed or strongly agreed (50%) that DCEBCE helped them discover hidden career-related interests and abilities within themselves. Six (15%) were undecided. Nobody disagreed with this statement.

Thirty (75%) students agreed that DCEBCE had motivated them to pursue a high school diploma more strongly than conventional school programs. This response may be attributed to those features of the program that provide students with a career goal and freedom of learning. Only 6 (15%) students were undecided, and 3 (7.5%) disagreed.

One of the less positive responses came to the question of DCEBCE's ability to improve student self understanding. Only 27 (67.5%) agreed or strongly agreed, while 7 (17.5%) students disagreed or strongly disagreed and 6 (15%) students were uncertain. This response, though reflecting agreement among a majority of students, may be attributed to the short duration of the summer session.

Almost three out of four students thought the program had influenced them in getting along better with others. Twenty-nine (72.5%) students agreed, while 9 (22.5%) were undecided. Only 2 persons (5%) disagreed strongly.

Thirty (75%) students felt that the resource persons they worked with were interested in their work in DCEBCE, while 8 (20%) students were undecided. Of course, the

agreement of resource persons to work in the program in the first place represents at least an initial interest in DCEBCE.

Thirty-three (82%) students agreed that they had enough freedom of choice in deciding what to do at the resourc sites. Only 4 (10%) students disagreed, and three were undecided. Resource sites were designed to encourage student decisions concerning their own activities with the guidance rather than the complete direction of resource persons.

Thirty-one (77.5%) students agreed that they did get to actually do things, rather than just sitting or listening. Only six (15%) students disagreed, and 3 (7.5%) student were undecided. Apparently, most resource persons engaged DCEBCE students in their daily activities in order to give them first hand experience.

Thirty-one (77.5%) students agreed that people at DCEBCE cared about them, while 2 (5%) students disagreed and 7 (17.5%) students were undecided.

Thirty-five (87.5%) students found the DCEBCE staff members patient in working with students. Four (10%) students were undecided. No students disagreed, although one student did not answer the question. Response by students to this item and the item immediately above indicate staff patience, perseverance and professional expertise.

Thirty-one (77.5%) agreed that DCEBCE gave them a chance for deciding how to run the school. Two (5%) students disagreed, and six (15%) students were undecided. This aspect of the program apparently enjoyed general popularity with the students.

Thirty-one (77.5%) agreed that they felt comfortable in taking personal problems to staff members. Five (12.5%) students disagreed and 4 (10%) were undecided. This response reveals that DCEBCE was successful in providing strong support for students.

Thirty-four (85%) students agreed that they learned many new things through DCEBCE. Five (12.5%) students were undecided and no students disagreed. The project did have many new things to offer: competency development, career motivation, self-developed program materials, an opportunity to work with potential employers, and above all, freedom from classroom boredom.

Thirty-three (82.5%) students agreed that the DCEBCE staff was personally concerned about them. Two (5%) students disagreed, and 6 (15%) students were undecided.

Only 23 (57.5%) students agreed that they honestly looked forward to coming to school in the morning. This was the only area that failed to elicit agreement from less than 60% of the students. Seven (17.5%) students disagreed, and 10 (25%) students were undecided. However, the response is really only a natural one for a summer program, and student attendance and performance in the program should be taken as a more accurate indication of student interest.

When the students were asked what they liked most about the DCEBCE summer program, their responses were simple and straight forward. Fifteen (37.5%) students felt that the freedom they were given to do their own planning was the single most important factor. Eight (20%) students identified the DCEBCE staff; and an equal number liked the opportunity to meet new people. Nine (22.5%) students liked most the fact that DCEBCE gave them an opportunity to learn about different careers. Other features mentioned, although not significant in numbers, included: that the program was new and interesting; that the program helped so many people; that credits could be earned; and that small groups created a family-lie environment.

A list of things students liked most about DCEBCE is detailed in Table 23.

Table 2 2

DCEBCE Features Students Liked Most

Item	Frequency *	Percentage
Freedom in the program	15	37.5
Learning about different careers	9	22.5
Staff members	8	20.0
Meeting new people	8	20.0
Nice, new and interesting	3	7.5
Small groups	2	5.0
Credits	1	2.5

* The total does not agree with the number of students taking part in the survey, since each student was given the option of listing as many items as applied.

Students were also asked what they liked least about DCEBCE. Fifteen (37.5%) said that getting up in the morning was the least liked aspect of the program. Only a handful of students reported other items. A list of things students liked least about DCEBCE is detailed in Table 24.

Table 23

DCEBCE Features Students Liked Least

Item	Frequency *	Percentage
Getting up in the morning	15	37.5
Too many forms to fill out	3	7.5
Like a regular summer school	2	5.0
Not many choices	2	5.0
Can't go straight to the site in the morning	2	5.0
Not enough time to work	2	5.0
Not enough resource people	2	5.0
Going home early	1	2.5

* The total does not agree with the number of students taking part in the survey, since each student was given the option of listing as many items as applied.

The students were also asked to name three important items they learned about careers through DCEBCE. Their responses fell into six broad categories: professional education (16 or 40%), dealing with people (11 or 27.5%), educational experience and problem solving (7 or 17.5%), salaries for different jobs (4 or 10%), and hard work (4 or 10%). All of these items are important. However, the fact that more students did not report these or other similar items about careers is a matter of concern. The low response rate to this item may be due to the shortness of the summer term.

When asked for suggestions for improving the program, the students had some serious ones to make, although a majority had no suggestions. The suggestions made were: introduce more extracurricular activities (3 or 7.5%), limit the number of tests (4 or 10%), awards for the winning students, and expand the program.

On the whole the student questionnaire revealed that the summer DCEBCE was a success as far as the students were concerned. Students were exposed to a new kind of career-oriented learning experience, and their reactions were favorable.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

The D.C. Experience Based Career Education Program has just concluded a successful summer program, serving 47 beginning and ending tenth graders. The dropout rate was comparatively low and the group was small enough to allow for the provision of individualized instruction by the DCEBCE staff of four learning coordinators, one resource analyst and the director.

Out of the almost 90 resource sites identified in the Washington area, over two dozen of them were used for the summer program. Both the students and the resource persons expressed a great deal of mutual appreciation at the end of the project, and certificates of recognition were awarded to those resource persons involved in the project. Students and their parents were satisfied by the unique features of the project, and a majority of 42 of the students plan to continue their participation in the Fall semester.

In view of the findings of this evaluation report, the following observations and recommendations are in order:

1.) Thanks to the excellent leadership of the project director and the dedication of the staff associated with the project director, DCEBCE has achieved all of its immediate project objectives and many corrollary objectives as well. At the formative stage of the project, an intensive summer training program would not have been possible without the arduous work of the DCEBCE staff.

2.) The project director was the moving force behind the entire DCEBCE operation. Her experience, talent, diplomacy, interest and committment overcame at the outset adverse circumstances impeding progress in the implementation of the DCEBCE Program. Thanks to her frankness and spirit of cooperation with the external evaluators, they gained many insights into the program. Without the project director there would have been no summer program.

3.) Within a period of six weeks DCEBCE began a successful operation. When the summer DCEBCE was planned there were only two learning coordinators and the director available for the planning and organization involved in the project implementation. As has been mentioned earlier, there was little furniture and equipment, and the facility at Payne was not ready

to be occupied. In spite of these obstacles, schools were visited for the recruitment of students, applications were screened, interviews for the final selection of students were conducted, student orientation was planned and conducted, the program was properly initiated while additional staff members were recruited, a high level of student interest was maintained, individual student projects were completed by almost half of all the attending students, and above all, the DCEBCE Program gained stature among the innovative programs in the D.C. Public Schools. The project was well organized, with a minimum of confusion. All of the above testifies to the excellence of the project, and this high level of excellence should be used to set an example for other new projects and programs in the system. It is, therefore, recommended that the DCEBCE Project be continued and further developed into a model program within the D.C. Public Schools, especially in the area of career development.

4.) The DCEBCE staff identified almost 90 different resource sites in and around the metropolitan Washington area. Twenty-six of them were used this summer for the training of DCEBCE students. The resource coordinators were very friendly and cooperative with the project, and many of them expressed their interest in continuing with the project. In consideration of their interest and experience in working with the DCEBCE students, it is recommended that all the Summer Resource Sites be included in the Fall Semester list, and that they be given top consideration by students in their selection of resource sites.

5.) The series of tests conducted by the external evaluators, particularly the Writing Sample and the Everyday Skills Test, revealed that DCEBCE students are lacking in the basic skills areas of reading, writing and mathematics. In the absence of a skills specialist, there was nobody on the staff to devote full time assistance to the students in these areas. Without improving basic skills, the students will find it difficult to function effectively in and outside of the classroom. It is, therefore, recommended that DCEBCE set a priority for the hiring of a skills specialist for the Fall so that students can be systematically channelled for additional training in their areas of deficiency.

6.) The Far West Laboratory Model adopted by the DCEBCE is both simple and flexible. It has been followed as closely as possible, and minor modifications were made to adapt it to the D.C. Schools. In order to insure the quality of the program, DCEBCE continues to maintain consultants from the Far West Laboratory. They have been most cooperative, and without them the successful implementation of the summer model would not have been possible. It is, therefore, recommended that the consultants from the Far West Laboratory be retained for the next year, and that they work closely with the project staff to become brokers of EBCE.

7.) Results of the Career Maturity Inventory, the Tennessee Self Concept Scale (administered at the beginning of the summer) and the comments made by student participants in the summer DCEBCE Program (at the end of the summer) indicated a need for student guidance and counseling. In the Far West Model, teacher coordinators serve many guidance and counseling roles. The continuing attention of teacher coordinators is needed to aid students in their understanding of themselves and in their career development. However, consideration should be given to hiring at least a part-time guidance counselor to work with students if persistent personal problems are manifested. It is, therefore, recommended that a counselor be hired to work with the DCEBCE students. This person should possess adequate preparation in career guidance and counseling.